A SYSTEM AND METHOD FOR PERFORMING SECURE CREDIT CARD PURCHASES

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2 ## BACKGROUND OF THE INVENTION

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4 ### Field of the Invention

5   This invention relates to a system and method of performing

6 secure credit card purchases in connection with remote

7 commercial transactions, wherein a credit card holder does not

8 have to reveal their credit card number to a merchant or a

9 mechanism controlled by the merchant in order to accomplish a

10 purchase, and wherein the merchant is still assured of the

11 necessary credit verifications and approvals prior to

12 authorizing and/or completing a credit card transaction, thereby

13 increasing overall security by minimizing any access to credit

14 card numbers without having to substantially modify or deviate

15 from existing, accepted credit card transaction practices.

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17 ### Description of the Related Art

18   The utilization of credit and debit cards to conduct

19 transactions is ever increasing. This is especially the case

20 with remote or "mail-order" transactions wherein merchants

21 desire to be assured of a payment prior to shipping a product.

22 For example, recent years have seen a substantial increase in

23 the popularity of televised shopping networks to further

supplement the popularity of catalogue type sales. Moreover, the increasing use and popularity of distributed computer networks such as the internet has also contributed to the dramatic increase in the number of remote commercial transactions conducted every day.

One primary reason associated with the rapid growth of remote commercial transactions is the ability of a merchant to reach an almost limitless number of potential customers at a substantially insignificant cost and with little or no operating overhead since an actual store is not required. Additionally, such sales techniques permit customers to view the products and services in a greatly expanded marketplace, representing a great number of vendors, without extensive travel and without foregoing the privacy and convenience of their home or other predetermined computer site in some cases. Simply put, a telephone or like communication avenue is all that is needed to place the consumer in contact with the merchant and complete the transaction.

The vast increase in popularity of remote commercial transactions conducted over the telephone or internet is further facilitated by the relatively simple protocols and procedures necessary to conduct such transactions. In particular, in order to complete a valid transaction, a merchant need not physically see the customer or the credit card, but must merely accept and enter a customer's credit card account number and an expiration

1 date thereof to obtain authorization. This same convenience,

2 however, is the primary disadvantage and/or problem associated

3 with conducting commerce in the manners set forth above.

4 Specifically, there is a great reluctance on the part of the

5 customer to transmit the credit card account information,

6 including the credit card number, because of the proliferation

7 of fraud, and a well recognized lack of security directed to the

8 protection of such account information. Indeed, it has been

9 established that security and privacy concerns are realistic due

10 to the fact that credit card account data is easily readable or

11 interceptable by unauthorized parties, and can be readily used

12 for all types of remote transactions with minimal risk of being

13 physically caught. In fact, unscrupulous individuals have many

14 ways of gaining access to a consumer's legitimate remote

15 transactions and thereby obtaining the credit card information.

16 This information can be obtained from old credit card receipts

17 or even from the unauthorized notation and use of the

18 information by merchants or their employees after a legitimate

19 transaction is made. Naturally, the latter is the most

20 difficult to prevent utilizing known methods and systems unless

21 a consumer is willing to completely forego the use of a credit

22 card for purchases.

23 In the case of computerized remote transactions, as

24 messages, including account data or other confidential

25 information, move across the internet, they can easily pass

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1   through numerous computers, any one of which can be utilized to

2   copy such confidential information or data, thereby leading to

3   a further risk of potential fraud when conducting such

4   transactions. Presently, some companies currently seek to

5   address such security and privacy concerns by the employment of

6   encryption programs and techniques. To this end there is an

7   extensive facility associated with both public and private

8   encryption schemes being deployed in order to guard the private

9   or secured information being transmitted across the internet or

10   like world wide networks. Unfortunately, however, even with

11   such encryption techniques, the account information must usually

12   still ultimately be transmitted to a third party who did not

13   previously have access to that information previously. Even

14   some more sophisticated systems which seek to interpose a

15   separate computer or encryption entity between the consumer and

16   the merchant so as to obtain authorization and forward it to the

17   merchant, that information must still be made available to

18   and/or transmitted to that third party, thereby leaving open an

19   avenue for fraud or theft. Further, such encryption techniques,

20   even if minimally effective for computerized remote

21   transactions, are not truly useable for other conventional types

22   of remote transactions, or even normal in person transactions.

23   Based on the above, there is an obvious need in the field

24   of art associated with remote commercial transactions for a

25   system and method of performing secure credit card purchases of

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goods and services which truly reduces the risk of potential fraud and theft by eliminating outside access to a consumer's private credit card information without requiring complex encryption equipment or significantly altering the ease and convenience of current transaction techniques. Further, such a system and method should also be effective for use in conventional, "in person" transactions as well, thereby providing an added measure of security and minimizing the hazards associated with the passing on of account information by unscrupulous merchants. Also, such a system should provide limits to potential loss or liability in a manner which does not impede the transaction.

Summary of the Invention

The present invention is directed towards a system and method of performing secure credit card purchases, wherein payment for goods or services purchased is efficiently accomplished while eliminating the necessity of disclosure or dissemination of a consumers specific credit card number or other account data which the customer or other individual may wish to maintain in confidence. The system and method of the present invention incorporates the advantage of consummating the purchase by the customer through the selection of any one of a plurality of predetermined payment categories. Collectively, the payment categories represent a variety of methods for

1   accomplishing payment for a fixed transaction, a multiple

2   transaction and/or a repeating transaction.

3   One embodiment of the system and method of the present

4   invention comprises a customer receiving information, including

5   specific data necessary for the purchase of any given product or

6   service. This promotional information generated by the merchant

7   can be received by any of a plurality of conventional means

8   including advertisements, catalogues, computer network

9   connections, direct person to person customer and merchant

10   contact, telephone solicitation, mail orders, television sales,

11   etc. Once the customer has identified the product or services

12   which he/she wishes to purchase, the customer contacts and

13   supplies a custodial authorizing entity with the requisite

14   information concerning both the identification of a specific

15   credit card or debit card account and a requested payment

16   category. Additionally, security against unauthorized use of

17   confidential account data may also preferably include

18   information relating to the merchant's identification and/or

19   location.

20   The custodial authorizing entity is preferably defined as

21   the entity which has or has been assigned the custodial

22   responsibility for the financial account data of a customer's

23   credit card account, including a previous knowledge of the

24   credit card number and other information such as credit limits,

25   payment history, available credit amounts and other information

which will determine the status of a given credit card account in terms of authorizing a requested payment for a current purchase.

As part of the security system for accomplishing a commercial transaction utilizing credit card or debit card payment, the custodial authorizing entity includes sufficient facilities, preferably including a processing computer or like applicable hardware for the generation of an exclusive transaction code. The transaction code is to be used in substitution for the credit card number and when utilized as authorized, will issue the merchant a credit approval, and will accomplish payment for the goods or services desired in the normal fashion normally associated with a credit or debit card transaction, without the publication or dissemination of an identifying credit card number for a specific customer's account to any entity that is not already aware of that information.

Further, a feature of the transaction code is its ability to indicate any one of preferably a plurality of predetermined payment categories which may be either requested by the customer or automatically chosen by the custodial authorizing entity based on the type of account or the type of purchase or other commercial transaction involved. Each of the payment categories are reflective of a different type of payment desired or required to consummate the intended purchase. More specifically, the plurality of payment categories may include a

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1   single transaction involving a specific dollar amount for a

2   purchase within a specific time period, such as twenty four

3   hours, during which authorization of the purchase remains valid.

4   Alternately, a single transaction may be involved wherein a

5   maximum limit or a dollar amount is determined above which the

6   purchase will become invalidated and further wherein a fixed

7   period of time is preferably established for maintaining

8   authorization of such purchase.   Other alternatives would

9   involve one or more of the categories coded to define multiple

10   transactions involving a maximum dollar amount for purchases, as

11   well as a fixed period of time for authorization of such

12   purchases, and/or a repeating transaction wherein payments may

13   be automatically accessed by a merchant over a predetermined or

14   unspecified time interval (such as every thirty days) for a

15   specific dollar amount or a maximum dollar amount limit. Also,

16   limits solely as to a specific merchant or a given time period

17   can be effectively established for which the transaction code is

18   valid.

19   A further feature of the present invention to be described

20   in greater details hereinafter, is the requirement that the

21   transaction code, once received by the customer is transmitted

22   to the merchant by the customer or a person specifically

23   authorized by the customer.   Only minimal contact by the

24   merchant and the custodial authorizing entity is provided for

25   purposes of the merchant verifying the validity of the

1   transaction code utilizing a conventional process electronically

2   or otherwise similar to the verification of a credit card number

3   normally offered to a merchant for the purchase of goods or

4   services.   There is, therefore, no disclosure, publication or

5   other dissemination of the specific credit card number of a

6   given customer account beyond those entities who already know

7   the information, and the transaction code is transmitted

8   exclusively to the customer by the custodial authorizing entity

9   who has the ability to better identify whether the customer is

10   properly authorized to use the account.   Moreover, the

11   transaction code, once given out by the customer, only has a

12   limited usefulness, thereby limiting the risk of misuse and

13   minimizing the potential losses to be experienced by the credit

14   card company and/or the account holder.

15   Accordingly, it is an object of the present invention to

16   provide a system and attendant method for performing remote

17   commercial transactions utilizing credit cards, which maximizes

18   the security of the transaction and limits the potential

19   liability to be experienced from a fraudulent transaction.

20   Yet another object of the present invention is to provide

21   a secure system and method for establishing credit card

22   purchases which eliminate the disclosure or dissemination of the

23   actual credit card number to anyone other than a custodial

24   authorizing entity which normally has custodial responsibilities

25   for account information including the previously established

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1   credit card number.

2   It is another object of the present invention to provide a

3   system and method of establishing secure credit card purchases

4   through the generation of a transaction code which renders it

5   extremely difficult or impossible to access or infiltrate a

6   customer's credit card account by unauthorized means.

7   It is yet another object of the present invention to

8   provide a secure method of completing a remote commercial

9   transaction which eliminates the need to convey actual account

10   information to a merchant, but which allows the merchant to

11   conduct a normal verification of information needed to

12   consummate a given purchase.

13   It is also an object of the present invention to provide a

14   system and attendant method of accomplishing secure credit card

15   purchases which eliminates the need to disclose or disseminate

16   a given credit card number while providing the customer with the

17   versatility of choosing any one of a plurality of predetermined

18   payment categories.

19   It is yet another feature of the present invention to

20   provide a system and method of accomplishing secure credit card

21   payments having the versatility of allowing the customer to

22   select any one of a plurality of payment categories which are

23   indicative of a variance in the amount of a purchase as well as

24   the time in which authorization for such payment is valid.

25   These and other objects, features and advantages of the

1   present invention will become more clear when the drawings as

2   well as the detailed description are taken into consideration.

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4   Brief Description of the Drawings

5   For a fuller understanding of the nature of the present

6   invention, reference should be had to the following detailed

7   description taken in connection with the accompanying drawings

8   in which:

9   Figure 1 is a schematic representation of a flow chart

10   showing various steps involved in the performance of the system

11   and method of the present invention for the secure credit card

12   purchasing;

13   Figure 2 is a schematic representation similar to that of

14   Figure 1 wherein customer to merchant contact is accomplished by

15   conventional facilities such as television; and

16   Figure 3 is a schematic representation similar that of

17   Figure 2 wherein customer to merchant contact is established

18   either by phone or in person.

19   Like reference numerals refer to like parts throughout the

20   several views of the drawings.

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22   Detailed Description of the Preferred Embodiment

23   As shown in the accompanying Figures, the present invention

24   is directed towards a system and method for accomplishing secure

25   credit card purchases. Moreover, these purchases can be "in

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person", but preferably include remote commercial transactions such as mail order, purchases over the internet, television solicitations, telephone solicitations, etc. Security is establish by virtue of the elimination of the need to disclose an active credit card number and expiration date to the merchant or any other party other than the original credit card company, issuing bank or like financial institution which already has custodial responsibilities for the financial or account data associated with a given customer's credit card account.

More specifically and with reference to Figure 1 the system as well as an attendant method is preferably instigated by the customer viewing a product, identifying a desired amount for a transaction and/or receiving promotional information as at 10, either in person or by any of the electronic or more conventional techniques which will be described in greater detail with reference to Figures 2 through 3. Once the customer reviews the product or promotional information and has sufficient information, such as including price, product or service identification, payment requirement, etc., regarding the remote commercial transaction to be conducted, the customer contacts, either by computer, telephone or in person, a custodial authorizing entity as at 12. The custodial authorizing entity may herein be defined as comprising that entity or institution which has or has been designated by the entity which has custodial responsibility for the financial data

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1   and security of a given credit card account of a customer. As

2   set forth above such custodial authorizing entity can be

3   represented by the credit card company issuing a credit card to

4   a given customer or alternately can be represented by a bank or

5   other financial institution serving to sponsor a credit card or

6   debit card to the extent of processing the debits and credit

7   associated therewith. The authorizing entity's custodial

8   responsibilities of course includes the previous knowledge

9   and/or storage of the credit card number serving to identify a

10   specific customer's credit card account. Once contacted, the

11   customer then supplies appropriate identification data to inform

12   the custodial authorizing entity of a specific customer's credit

13   card account as at 14. In addition, the customer will supply

14   the custodial authorizing entity with additional required

15   information needed to consummate the purchase as well as ensure

16   the security of the account in order to prevent its unauthorized

17   use. Such additional information may preferably include the

18   identification of the merchant or merchants involved, when such

19   information is deemed necessary, and a requested one of a

20   plurality of predetermined payment categories to facilitate

21   consummation of the purchase of the products or services

22   desired. Such predetermined plurality of payment categories

23   will be discussed in greater detail hereinafter.

24   Once the appropriate information has been received from the

25   customer as indicated at 16, the custodial authorizing entity

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1   verifies the credit card status and account identification of

2   the customer to determine the viability of the account in terms

3   of dollar amount limits, payment history, available credit

4   balance, etc.   If the accessed credit card account is not in

5   good standing, the custodial authorizing entity will permanently

6   or temporarily terminate the transaction as at 18 and/or

7   communicate to the customer directly as at 18' by any applicable

8   means for purposes of informing the customer of the unacceptable

9   status of the accessed credit card account.   If the credit card

10   account is in good standing, based at least in part on the

11   requested payment category, (amount of payment), the custodial

12   authorizing entity generates a transaction code as at 20.   The

13   transaction code is used in substitution for the specific credit

14   card number which would normally identify a customer's credit

15   card account and would allow access thereto by any entity having

16   possession of the credit card number whether or not such

17   possession was authorized or unauthorized.   More specifically,

18   the transaction code is pre-coded to be indicative of a specific

19   credit card account, preferably a merchant or merchants

20   identification and a designated payment category, selected from

21   the plurality of predetermined payment categories as set forth

22   above.   Once generated, the transaction code is communicated

23   exclusively to the authorized and verified customer by the

24   custodial authorizing entity as at 22, wherein the system and

25   method of the present invention preferably restricts

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1   communication between the custodial authorizing entity and the

2   merchant except to conduct a normal verification as will be

3   explained.

4   The verified customer thereafter and preferably within a

5   time limit to be determined by the customer and pre-coded in

6   association with the transaction code, will directly or through

7   an authorized representative communicate the transaction code to

8   the merchant as at 24. The system and method of the preferred

9   embodiment of the present invention contemplates that only the

10   verified customer will transmit the generated transaction code

11   to the merchant in the case of a remote commercial transaction,

12   thereby limiting knowledge of the transaction code to those

13   parties having a need to know. Of course, however, as the

14   transaction code will generally have a limited value as defied

15   by the verified customer when obtained, the verified customer

16   may designate an agent or other entity to act as the customer on

17   his/her behalf, with the amount of potential liability to be

18   experienced by such a transaction to be limited to the amount

19   defined by the verified customer when obtaining the transaction

20   code.

21   At this point the purchase is consummated at least from the

22   customer standpoint in that the customer has previously

23   established the acceptable status of the account. Therefore the

24   customer feels free to disclose the transaction code to the

25   merchant or merchants instead of the actual credit card number

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1   as at 22, 24 and is relatively unconcerned if the transaction

2   code is published or otherwise disseminated to unauthorized

3   entities.   In a preferred embodiment wherein a merchant

4   identifier is pre-coded in association with the transaction

5   code, the pre-coding of the transaction code will prohibit an

6   unauthorized use due at least in part to the fact that the

7   merchant is specifically identified and any attempt to use the

8   transaction code other than by the identified merchant will be

9   prohibited.   In addition, the merchant is prevented from

10   "overcharging" or "extending" the purchase by fixing the dollar

11   amount to satisfy the specific cost or limit of the purchase as

12   well as a specific time limit or time parameters in which the

13   authorization for payment is valid.   Such information, as set

14   forth above, is communicated by the requested and subsequently

15   designated payment category as set forth above.   Restricted

16   communication between the merchant and the custodial authorizing

17   entity as at 26 is permitted exclusively for purposes of

18   verification of the transaction code in a manner, which may

19   utilize, at least to some extent, conventional facilities for

20   the verification of a credit card number by most merchants or

21   like commercial establishments.   As a result, the merchant also

22   has a desired verification as to the validity of a transaction

23   and can effectively make arrangements to be paid by the credit

24   card company.

25   If for some reason the transaction code is refused

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1   verification, the customer may be informed directly by the

2   merchant as at 28 and or the transaction may be terminated as at

3   30.   Assuming verification of the transaction code by the

4   custodial authorizing entity, the merchant proceeds to

5   consummate the purchase and send the order, as at 32, in the

6   case of a remote commercial transaction.

7   Figures 3 and 4 are representative of the versatility of

8   the system and method of the present invention wherein the

9   customer 54 may receive the aforementioned promotional

10 information from the merchant 56 by any appropriate means such

11 as television solicitation as at 58, phone solicitation as at 60

12 and/or personal solicitation as at 62.   Once the customer

13 receives the promotional information, which may include the

14 viewing of the product itself, or in advance if a general

15 estimate as to the ultimate cost of an anticipate purchase(s)

16 can be made prior to viewing promotional information, the

17 customer contacts the custodial authorizing entity 64 by any

18 appropriate electronic or conventional facilities such as direct

19 phone to phone contact as at 66 and 66' or direct computer

20 contact as at 42', 45'.   Once the customer's authorization is

21 confirmed, details of the anticipated transaction are

22 established so as to determine a payment category, and the a

23 transaction code is issued to the customer.   The customer,

24 either directly or through a representative, can then utilize

25 the transaction code to consummate a transaction within the

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1   defined parameters of the payment category. Moreover, the

2   merchant 56, through a conventional, yet restricted

3   communication with the custodial authorizing entity 64 by any of

4   a plurality of conventional or electronic methods using computer

5   to computer linking as at 44', 45' or by telephone transmission

6   as at 56', 66', can obtain a verification and subsequent payment

7   utilizing the transaction code only.

8   As emphasized above, an important feature of the present

9   invention is the ability of the customer to request a desired or

10   a required payment category and the ability of the custodial

11   authorizing entity 64 and/or a processing computer 45 of the

12   custodial authorizing entity to issue a transaction code in

13   accordance with the payment category. The payment categories,

14   may be collectively defined as a variety of different types of

15   transactions. Such transactions may include a single

16   transaction for a specific amount of a purchase to be

17   consummated. Alternatively, the payment category may include a

18   single transaction defined by a single purchase having a maximum

19   limit amount, wherein the specific or precise cost of the

20   purchase has not been determined for a variety of reasons, and

21   as such, the customer desires to set a maximum amount for which

22   the single transaction may be made. Accordingly, with such a

23   payment category, the exact amount may not be known in advance,

24   but the customer is assured of not paying over the specifically

25   designated maximum limit. In addition, the transactions are

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1 preferably, but not necessarily, authorized to be conducted only

2 over a fixed life period of time, such as within twenty four

3 hours, thereby ensuring that an outstanding transaction code

4 does not remain valid if not used as generally intended. This

5 limited time period can, of course be varied or omitted

6 depending upon the wishes of the customer and/or the policies of

7 the custodial authorizing entity. Also, these or any other

8 payment category transactions may include a specific merchant

9 identification to further restrict use of the transaction code.

10   The payment category may also include a multi-transaction

11 authorization wherein more than one purchase may be made from

12 one or a plurality of different merchants, each of which may or

13 may not be identified by the customer and pre-coded in

14 association with the transaction code, and wherein a total cost

15 of the plurality of purchases may not exceed a maximum limit

16 amount. This transaction can also be limited to having to take

17 place within a predetermined, designated fixed life span, such

18 as but not limited to twenty four hours. Accordingly, in some

19 instances wherein a customer, or an agent of the customer, such

20 as a child, guardian, or care giver, must make a number of

21 transactions or purchases which are authorized by the customer,

22 the customer may designate a maximum amount which can be spent

23 utilizing a particular transaction code within a predetermined

24 period of time, and/or can designate that only one merchant,

25 whether designated or not, can use the transaction code.

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As yet another alternative, the payment category may include a repeating transaction for a specific amount to be paid in each of a fixed number of intervals. For example, the customer may which to join a gym or receive services or products over a fixed number of payment intervals, such as every thirty days. Accordingly, the merchant will be authorized to charge the credit card account designated by the corresponding transaction code a fixed monthly payment. Similarly, a repeating transaction for a stated minimum interval such as every thirty days may be authorized for a specific amount for an unspecified number of intervals wherein the merchant will be authorized to continuously obtain payment on a "monthly" basis until the customer decides to cancel such authorization. Also, a more open ended transaction wherein charges may be performed until cancelled and with or without other limiting criteria may also be provided.

Since many modifications, variations and changes in detail can be made to the described preferred embodiment of the invention, it is intended that all matters in the foregoing description and shown in the accompanying drawings be interpreted as illustrative and not in a limiting sense. Thus, the scope of the invention should be determined by the appended claims and their legal equivalents.

Now that the invention has been described,